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# Recycling and Recycled Products Program

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Annual Report  
Fiscal Year 2001



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## Annual Report

### Fiscal Year 2001 Accomplishments

The Texas Department of Transportation (TxDOT) takes great pride in presenting its recycling accomplishments for each fiscal year. These efforts were recognized during 2001 through the receipt of four major awards for FY00 achievements (see **Continuing Award Winning Efforts**, page 4).

TxDOT's three primary goals, which are highlighted in this report, are:

- 1) To buy recycled products and materials,
- 2) To recycle and reduce the amount of waste that TxDOT generates, and
- 3) To communicate the advantages, savings, and benefits of recycling to TxDOT staff.

"Buy recycled" activity at TxDOT includes the procurement of recycled, remanufactured, or environmentally sensitive supplies, materials and equipment, referred to in general terms as "green products."

### "Buy Recycled"

TxDOT's "buy recycled" totals are collected in two primary categories (see table below): first, open market and contract purchases made through the Texas Building and Procurement Commission (TBPC), formerly the General Services Commission (GSC); and the second and larger category, recycled roadway construction materials\*.

Table 1: TxDOT "Green Product" Purchases (in millions):	FY 95	FY 96	FY97	FY 98	FY 99	FY 00	FY 01
<b>Purchases through TBPC</b>	\$17.9	\$16.0	\$7.9	\$16.1	\$11.4	\$13.8	\$33.5
<b>TBPC Delegated Purchases</b>	No data	\$1.5	\$82.5				
<b>Recycled Roadway Products:</b>							
<b>Crushed Concrete</b>	No data	\$9.8	\$ 8.4				
<b>Fly Ash</b>	\$3.8	\$13.2	\$10.3	\$8.6	\$37.7	\$64.9	\$41.3
<b>Glass Beads</b>	\$10.5	\$7.2	\$8.4	\$9.6	\$10.0	\$10.8	\$44.1
<b>Products w/Crumb Rubber</b>	\$9.8	\$13.6	\$15.1	\$18.4	\$18.8	\$37.8	\$49.9
<b>Steel: Structural &amp; Railing</b>	No data	\$61.6	\$45.9				
<b>Total Dollar Expenditure:</b>	\$42.0	\$50.0	\$41.7	\$52.7	\$77.9	\$200.1	\$305.6

\*Note: There are many more recycled-content products and materials used in road construction than those listed. Data regarding volumes and expenditures, however, are not readily accessible using current tracking systems.

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## Total Green Product Purchases

In FY01, TxDOT spent more than \$305 million on recycled, remanufactured, and environmentally sensitive products, an increase of 52.8% over the previous year's purchases. The change was due primarily to significant increases in TBPC, Glass Beads and Crumb Rubber purchasing. Altogether, green product purchases for FY94-01 have totaled \$805.7 million.

- “Green Purchases” through the TBPC increased significantly in FY01 compared to FY00. Enhancements in TBPC’s data collection process continue to bring greater consistency in product classification coding, record keeping and reporting.
- The additions of steel and crushed concrete purchasing (included in FY00 and again in FY01 but not in previous FY reports) again added another \$54.3 million to the “recycled” roadway material purchase totals for FY01.
- FY01 saw a dramatic shift in the reported quantity of glass beads purchased and used in TxDOT construction. The use of glass beads increased 100.6 % from 22,415 tons (FY00) to 44,964.6 tons in addition to a change from TxDOT’s use of Type 2 to a higher quality Type 3 grade glass bead.
- TxDOT continues to explore construction applications for tire shreds and crumb rubber, and saw another increase (\$12.1 million) in the amount spent on products made from scrap tires. The volume of scrap tire rubber used in TxDOT projects increased 79% in FY01 to 13,663 tons.

## Landfill Tonnage Diverted

There are other environmental benefits to “green product” purchases. One of the most significant is the amount of valuable natural resources kept out of landfills (shown below:).

Table 2: Landfill Tonnage Diverted (Tons):	FY 95	FY 96	FY97	FY 98	FY 99	FY 00	FY 01
Crushed Concrete*	551,600	739,600	856,400	941,200	952,000	820,000	700,000
Fly Ash	170,586	817,407	1,007,976	570,319	1,256,525	2,179,359	1,375,167
Crumb Rubber	4,763	3,056	4,412	11,119	4,333	7,623	13,663
Glass Beads	4,927	3,593	10,516	14,838	21,661	22,415	44,965
Paper	538	606	410	562	695	512	405
Scrap Metal	4,072	3,395	3,247	3,355	4,216	5,246	3,341
<b>Grand Totals:</b>	<b>736,486</b>	<b>1,567,647</b>	<b>1,882,961</b>	<b>1,541,393</b>	<b>2,239,430</b>	<b>3,035,155</b>	<b>2,137,541</b>

\*Note: Landfill tonnage diversion figures were modified this year and for subsequent years based upon data supplied and revised by a TxDOT vendor. Dollar figures for previous years were not included in Table No. 1 due to a decision not to modify the total FY \$ amounts purchased.

## Waste Reduction Activities

TxDOT's waste reduction activities focus on:

- Materials that are sold or donated for reuse or recycling;
- Materials reused by TxDOT and by contractors on TxDOT projects; and
- Materials that are returned for remanufacture for future use by the department.

From FY94 to FY01, TxDOT's efforts in waste reduction diverted over 13,673,813 tons of materials from landfills. This tonnage diversion is equivalent to more than 1,367 pounds for every man, woman, and child in Texas!

### **District "Green Product" Purchasing**

The FY01 Annual Report identifies individual district participation based on purchase levels for **TBPC "Green Products,"** including **Fly Ash, Glass Bead, and Crumb Rubber.** A summary review of district participation statistics can be found on the last page of this report. Some interesting observations were noted, including the following:

- The top ten districts as ranked by **Grand Total** Purchases for FY01 were:
 

#1 – Abilene (\$15.18 million);	#6 – Amarillo (\$7.43 million);
#2 – Houston (\$13.68 million);	#7 – Ft. Worth (\$7.39 million);
#3 – Bryan (\$10.5 million);	#8 – Paris (\$7.11 million);
#4 – Tyler (\$8.67 million);	#9 – Atlanta (\$7.08 million);
#5 – Dallas (\$8.15 million);	#10 –Lufkin (\$5.88 million).
- The top five districts as ranked by **TBPC "Green Product"** Purchases for FY01 were:
  - #1 – Paris; #2 – Houston; #3 – Dallas; #4 - Amarillo; #5 – Corpus Christi.
- The top five districts as ranked by **Fly Ash** Purchases for FY01 were:
  - #1 – Houston; #2 – Abilene; #3 –Ft. Worth; #4 – Austin; #5 – Atlanta.
- The top five districts as ranked by **Glass Bead** Purchases for FY01 were:
  - #1 – Houston; #2 – Dallas; #3 – Ft. Worth; #4 –Lubbock; #5 – Yoakum.
- The top five districts as ranked by **Crumb Rubber** Purchases for FY01 were:
  - #1 – Bryan; #2 – Abilene; #3 – Amarillo; #4 –Tyler; #5 – Paris.
- The **Abilene** District Office's **#1** ranking for **Grand Total** Purchases (\$15.18 million) was boosted by the district's **#2**-ranked purchases of fly ash (\$7.39 million), a **#2** ranking in crumb rubber purchases (\$5.83 million), and **#10** ranking in glass bead purchases (\$1.77 million).
- The **Houston** District Office's **#2** ranking in **Grand Total** Purchases (\$13.68 million) was boosted by a **#1** ranking in fly ash purchases (\$9.31 million), a **#1** ranking in glass bead purchases (\$3.18 million), and a **#2** ranking in TBPC purchases (\$933,034).
- The **Bryan** District Office's **#3** in **Grand Total** Purchases (\$10.5 million) was boosted by a **#1** ranking in crumb rubber purchases and a **#9** ranking in glass bead purchases (\$1.80 million).

## Continuing Award-Winning Efforts

In January 2001, the Rubber Pavements Association awarded the “**Outstanding Program**” Award to TxDOT for outstanding accomplishments in the increased use of crumb rubber in highway construction applications. During the previous fiscal year, TxDOT’s acclaimed program received recognition as winner of both the **Year 2000 Texas Quality Initiative (TQI) Award** and the **Year 2000 National Quality Initiative (NQI) “Making a Difference” Silver Award**, both in the **State Quality Initiative** category. The same year TxDOT’s program also was awarded the Recycling Coalition of Texas’ “**2000 Environmental Excellence Award**” for the **Outstanding County, Municipal, or Regional Recycling Program**; and the **2000 Texas Environmental Excellence Award – Government** category.

## Recycling and Recycled Products Program Web Site

TxDOT’s Recycling and Recycled Products Program (R&RPP) web site has also seen a significant increase in activity over the past two years. Since initial monitoring of Internet hit activity in August 1999 with 1,633 hits for the month, interest has continued to build in TxDOT’s readily available recycling research and recycling activity. A record 8,250 hits were recorded for the month of December 2001 and expectations are that this will soon be surpassed with a 10,000-hit month.

## Summary

TxDOT continues to make significant progress in conserving natural resources, reducing pollution, and generating savings for Texas taxpayers. It is through projects such as these that TxDOT is producing cost-effective, good quality roads and helping address the waste disposal issues that confront Texas. TxDOT’s dedication to innovation and sound engineering practices in transportation construction, coupled with the use of recycled materials, is producing substantial engineering, economic, and environmental benefits for the present and for the future.

*Make the Smart Choice:*  
**Buy Recycled**



**Please note:** All information included in this report was collected to the best of our abilities. Some numbers are known to be significantly lower than actual because of incomplete reporting

TxDOT RECYCLING & RECYCLED PRODUCTS PROGRAM												
District Purchases & Rankings for FY01 (Includes GSC, Fly Ash, Glass Bead, and Crumb Rubber Purchases)												
Updated: 02/13/02												
		GSC	FY		FY		FY	Crumb	FY	Grand	GTP	
	DO	G.P.	01	Fly Ash	01	Glass Bead	01	Rubber	01	Total	FY01	
District:	No.:	Purchases	Rank	Purchases	Rank	Purchases	Rank	Purchases	Rank	Purchases	Rank	District:
Abilene	8	\$190,341	11	\$7,394,482	2	\$1,774,565	10	\$5,825,545	2	\$15,184,932	1	Abilene
Amarillo	4	\$494,948	4	\$57,581	21	\$1,130,711	20	\$5,748,544	3	\$7,431,785	6	Amarillo
Atlanta	19	\$177,954	13	\$3,524,244	5	\$1,732,245	11	\$1,650,000	10	\$7,084,443	9	Atlanta
Austin	14	\$65,396	23	\$3,541,096	4	\$1,287,697	19	\$300,575	22	\$5,194,764	11	Austin
Beaumont	20	\$47,788	24	\$816,438	13	\$1,393,366	18	\$0	25	\$2,257,592	24	Beaumont
Brownwood	23	\$91,018	19	\$838,196	12	\$754,988	25	\$1,888,537	8	\$3,572,738	15	Brownwood
Bryan	17	\$182,414	12	\$190,273	18	\$1,804,239	9	\$8,320,411	1	\$10,497,337	3	Bryan
Childress	25	\$78,157	20	\$1,174,758	9	\$813,685	24	\$1,273,970	13	\$3,340,570	18	Childress
Corpus Christi	16	\$443,928	5	\$187,561	19	\$1,494,311	14	\$912,188	18	\$3,037,988	21	Corpus Christi
Dallas	18	\$586,063	3	\$3,440,297	6	\$2,979,147	2	\$1,140,252	14	\$8,145,760	5	Dallas
El Paso	24	\$99,054	17	\$0	23T	\$1,478,604	16	\$1,027,389	16	\$2,605,047	23	El Paso
Fort Worth	2	\$163,899	14	\$3,953,858	3	\$2,842,356	3	\$432,410	20	\$7,392,523	7	Fort Worth
Houston	12	\$933,034	2	\$9,305,729	1	\$3,117,082	1	\$327,402	21	\$13,683,246	2	Houston
Laredo	22	\$7,276	25	\$86	22	\$975,663	22	\$1,877,231	9	\$2,860,256	22	Laredo
Lubbock	5	\$160,447	15	\$320,977	16	\$2,717,526	4	\$1,526,228	11	\$4,725,178	13	Lubbock
Lufkin	11	\$325,532	8	\$282,628	17	\$2,369,323	7	\$2,905,068	6	\$5,882,550	10	Lufkin
Odessa	6	\$135,544	16	\$0	23T	\$1,513,355	13	\$1,412,854	12	\$3,061,753	20	Odessa
Paris	1	\$1,552,784	1	\$1,165,025	10	\$1,486,195	15	\$2,905,284	5	\$7,109,288	8	Paris
Pharr	21	\$95,349	18	\$1,207,830	8	\$1,052,898	21	\$771,936	19	\$3,128,013	19	Pharr
San Angelo	7	\$408,236	6	\$0	23T	\$1,450,787	17	\$24,930	24	\$1,883,953	25	San Angelo
San Antonio	15	\$355,057	7	\$677,615	14	\$2,447,513	6	\$71,900	23	\$3,552,085	16	San Antonio
Tyler	10	\$292,546	9	\$1,550,752	7	\$2,100,328	8	\$4,723,032	4	\$8,666,658	4	Tyler
Waco	9	\$76,166	21	\$359,822	15	\$1,697,358	12	\$2,665,278	7	\$4,798,624	12	Waco
Wichita Falls	3	\$223,690	10	\$1,082,739	11	\$940,206	23	\$1,103,112	15	\$3,349,747	17	Wichita Falls
Yoakum	13	\$65,976	22	\$140,962	20	\$2,707,213	5	\$1,017,000	17	\$3,931,152	14	Yoakum
Division Offices		\$26,267,984	---	\$42,076	---	\$3,920				\$26,313,980		Division Offices
Add.Delegated Pur.		\$136,923,677		---		---		---		\$136,923,677		
Totals:		\$170,444,258		\$41,255,023		\$44,065,281		\$49,851,074		\$305,615,636		
District Average:		\$5,767,051		\$1,648,518		\$1,762,454		\$1,994,043		\$11,172,066		